

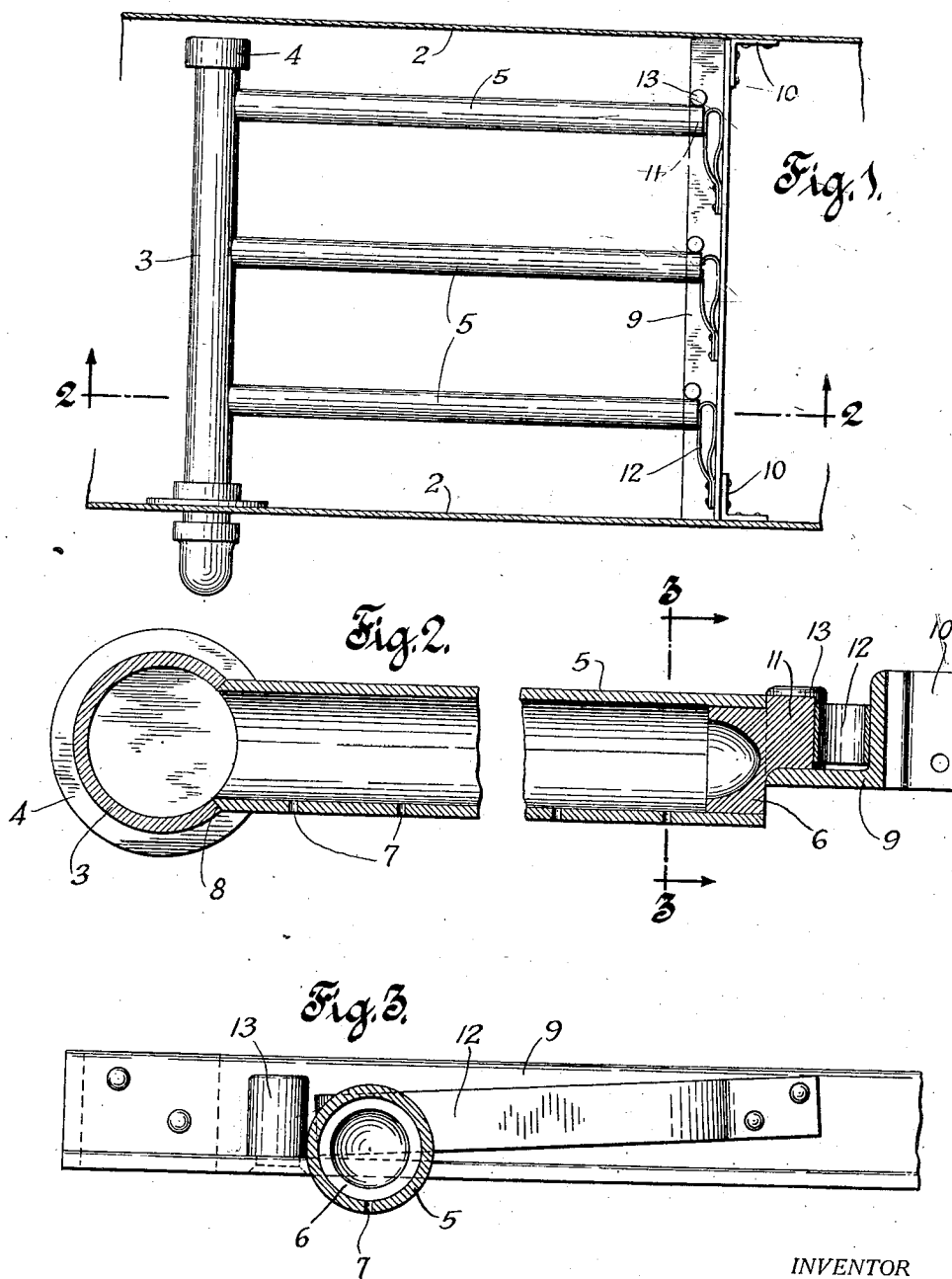
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P. H. DAVIS

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SPRAYING MANIFOLD

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INVENTOR

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SPRAYING MANIFOLD.

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To all whom it may concern:

Be it known that I, PATRICK HENRY DAVIS, a citizen of the United States, residing at Leonia, New Jersey, have invented
5 new and useful Improvements in Spraying Manifolds, of which the following is a specification.

This invention relates to improvements in spraying manifolds, and more particularly to such manifolds as are used in dish-
10 washing machines, the principal object of the invention being to provide a device of this character in which the spray tubes can be easily and quickly removed from the
15 manifold for cleaning purposes and at the same time form a water-tight joint when in operative position.

With the foregoing and other objects in view, which will appear as the description
20 proceeds, the invention consists in the novel features of construction and combination of parts which will be more fully described hereinafter and particularly pointed out in the claims.

25 In the drawings accompanying and forming part of this specification,

Figure 1 is a plan view of a manifold embodying the present invention, the side walls of the enclosing casing being shown
30 in section and broken away at their ends;

Fig. 2 is a broken-away, sectional view, on an enlarged scale, taken on the line 2—2 of Fig. 1; and,

35 Fig. 3 is a sectional view taken approximately on the line 3—3 of Fig. 2.

The same characters of reference designate the same parts in the different figures of the drawings.

In the art of dish-washing machines, a
40 device known as a manifold is generally employed for supplying a spray of water or other cleansing fluid to the articles supported in the machine. The present invention relates only to this portion of the
45 machine, and therefore it has been deemed unnecessary to illustrate the machine itself.

Referring to the drawings, 2 designates the side walls of the casing of the machine.
50 Supported in one of the side walls is a tubular manifold 3, which is adapted to be connected at the exterior of the casing with a stand-pipe or other system of water supply. The manifold passes into the casing
55 and extends transversely thereof, the free

end being covered by a suitable cap 4 forming a water-tight joint between it and the manifold.

Extending from the manifold and in communication therewith are a plurality of
60 spray tubes or nozzles 5, each of which is sealed at its free end by a plug 6 and is provided at one side with a longitudinally extending series of small perforations 7 through which the cleansing fluid is sprayed
65 on the dishes to be washed.

It has been found extremely desirable in devices of this character that the spray tubes be removably connected with the manifold for permitting said tubes to be
70 properly cleaned. In all of the manifolds heretofore in use with which I am familiar, the only way of detachably connecting the spray tubes with the manifold was by
75 means of screw threads, but owing to the length of time it took to remove them it was seldom done, and consequently the tubes very soon became foul and clogged, so that they did not perform their function efficiently. The present invention is intended
80 to overcome this defect and to make the tubes so easily removable that the entire set can be removed and replaced after each cleaning operation, the time consumed in removing and replacing the tubes being but
85 a very small fraction of that heretofore required.

In the example shown in the drawings, the manifold is provided with openings, one for each spray tube, the walls of said openings
90 being beveled to form seats for the ends of the spray tubes or nozzles, which are correspondingly beveled, as shown at 8, Fig. 2. The spray tubes and their corresponding openings are ground to a nice fit so as to
95 form a water-tight joint when the nozzles are in operative position. For supporting the nozzles in horizontal alignment with the manifold, I have provided a member 9 extending transversely of the casing and se-
100 cured thereto at its opposite ends by means of brackets 10. This supporting member is preferably of L-shape in cross-section and the plugs 6 at the ends of the nozzles are each formed with a tongue 11 which rests upon
105 the horizontal leaf of the member 9, while the end of the plug abuts against the vertical edge of said leaf. Spring members 12, one for each nozzle, preferably bent into the form of loops, are secured to the vertical leaf
110

of the member 9, each in proper position to engage the end of the tongue 11 of one of the nozzle and press the nozzle towards its seat in the manifold. By reason of this construction, the nozzles will have a swinging movement about the openings in the manifold, a vertically extending stop pin 13 being secured in the horizontal leaf of the member 9 for limiting the movement of each of the nozzles.

From the foregoing it will be seen that when it is desired to remove the nozzles, it is necessary for the operator merely to grasp each nozzle in succession and swing its free end away from the pin 13 and beyond the influence of the spring 12, whereupon the nozzle can be readily removed from its opening in the manifold. After the nozzles have been cleaned, they are replaced by seating their ground ends in the openings in the manifold and pushing their free ends over the horizontal leaf of the member 9 until they abut against the stop pins 13, as shown in the drawings.

While I have described in detail the device herein illustrated, it is to be understood that I do not thereby limit my invention to the precise features of construction shown, as I am aware that many mechanical changes and modifications may be made therein without departing from the spirit and scope of the invention as set forth in the claims hereto appended.

Having thus described my invention, what I claim is:

1. A device of the class described, comprising a supply pipe, a plurality of spray tubes each having one end in communication with said pipe transversely thereof, and means acting on the opposite ends of the tubes for maintaining the same in contact with the pipe.

2. A device of the class described, com-

prising a supply pipe having an opening in its side wall, the wall of said opening being adapted to form a seat, a tube having one end adapted to be seated in said opening to form a liquid-tight joint, and means acting on the opposite end of the tube for retaining said tube and pipe in close contact.

3. A device of the class described, comprising a supply pipe, a tube having one end communicating with said pipe transversely thereof, means for supporting said tube in horizontal alignment with the pipe, and means exerting pressure on said tube in the direction of its axis thereby to retain the tube in close contact with the pipe.

4. A device of the class described, comprising a supply pipe, a tube having one end communicating with said pipe transversely thereof, means for supporting said tube in horizontal alignment with the pipe, and flexible means exerting pressure on said tube in the direction of its axis thereby to retain the tube in close contact with the pipe.

5. A device of the class described comprising a pipe, a tube having one end in communication with said pipe transversely thereof and adapted to be swung relative thereto, and means acting on the opposite end of said tube for maintaining said tube in horizontal alignment in contact with said pipe.

6. A device of the class described, comprising a pipe, a tube having one end in communication with said pipe and adapted to be swung relative thereto, flexible means for exerting pressure on the opposite end of the tube thereby to retain the same in contact with said pipe, and means for limiting the swinging movement of the tube in one direction.

In testimony whereof I have signed my name to this specification.

PATRICK HENRY DAVIS.